

ADDAGE AKULPOL-F1020 (SMF POWDER)

SMF is new generation concrete admixture. It is Melamine Resin based effective Superplasticizer for concrete. It is a high range water reducing admixture and gives high early and final strength to the concrete. It increases the workability of concrete mix and lower water requirement that leads to a concrete of higher compressive strength and improved durability.

High water reduction and Improved Workability:

Theoretically, a water/cement ratio of about 0.28 is adequate for the hydration of cement, so any water in excess of that amount in concrete for improving the workability will reduce the compressive strength of concrete. It is also well known that decreased water/cement ratios result in cured concrete of improved strength. **SMF** is capable of reducing the water quantity by 20-30% depending on dosage and yet giving workable concrete. As workability is improved, high strengths concrete can be placed with less mechanical vibrations.

High early and final compressive strength:

The capability of **SMF** to be able to reduce water to a great extent helps it to give higher final strength to the concrete. Moreover, the effective dispersing property minimizes the porosity of the concrete and strong intermolecular bonds formed lead to very high early strength.

Air entrainment:

Approximately 1% additional air is entrained

Some of the advantages of using SMF are as below:

- ☐ High workability of concrete is achieved
- ☐ High water reduction can be done. Lesser water leads to ☐ higher final strength.
- ☐ It gives high early strength which facilitates faster ☐ De-molding in pre-stressed products
- ☐ Bleeding and segregation is minimized. ☐
- ☐ A much higher dimensional stability of concrete is achieved ☐ due to excellent dispersion and higher intermolecular bond strength.
- ☐ Decreases the concrete porosity and modifies its ☐ morphology.
- ☐ Shrinkage control of concrete is achieved because of reduced ☐ water.